

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method of preparing Use of  $\gamma$ -glutamyl-peptide in the preparation of a medicament or nutritional formulation for humans or animals for the treatment, testing for or prophylaxis of a disease or condition which is characterized by increased bone resorption, the method comprising adding  $\gamma$ -glutamyl-peptide to the medicament or nutritional formulation.

2. (Currently Amended) A method of treating a human or animal having a disease or condition that is characterized by increased bone resorption, the method comprising Method of administering to a human or animal who can benefit from a medicament or nutritional formulation comprising an effective amount of  $\gamma$ -glutamyl-peptide.

3. (Currently Amended) The method ~~as claimed in~~ of claim 2 wherein the human or animal is in need of  $\gamma$ -glutamyl-peptide.

4. (Currently Amended) The method ~~as claimed in~~ of claim 2 wherein bone resorption is inhibited.

5. (Currently Amended) A method Method of treating, testing for or preventing a disease or condition which is characterized by increased bone resorption, the method comprising administering to a human or animal in need thereof an effective amount of  $\gamma$ -glutamyl-peptide.

6. (Currently Amended) ~~Use of~~ A method of  $\gamma$ -glutamyl-peptide in the dietary management of increased bone resorption, the method comprising adding  $\gamma$ -glutamyl-peptide to the diet of a human or animal.

7. (Currently Amended) The method of claim 6 wherein the  ~~$\gamma$ -glutamyl-peptide~~  $\gamma$ -glutamyl-peptide is selected from the group consisting of  $\gamma$ -glutamyl-alkyl-cysteine sulfoxide, or  $\gamma$ -glutamyl-alkenyl-cysteine sulfoxide, or ~~or~~ and any combination thereof.

8. (Currently Amended) The ~~use~~ method of claim 1 wherein the  $\gamma$ -glutamyl-alkenyl-cysteine sulfoxide is  $\gamma$ -L-glutamyl-trans-S-1-propenyl-L-cysteine sulfoxide.

9. (Currently Amended) The ~~use~~ method of claim 1 wherein the disease or condition which is characterized by increased bone resorption, is Paget's disease, tumor-induced bone disease or osteoporosis or any combination thereof.

10. (Original) A nutritional composition comprising  $\gamma$ -glutamyl-peptide and a nutritionally acceptable carrier.

11. (Currently Amended) The nutritional composition of claim 10 wherein the  ~~$\gamma$ -glutamyl-peptide~~  $\gamma$ -glutamyl-peptide is selected from the group consisting of  $\gamma$ -glutamyl-alkyl-cysteine sulfoxide, or  $\gamma$ -glutamyl-alkenyl-cysteine sulfoxide, or ~~or~~ and a combination thereof.

12. (Original) The nutritional composition of claim 11 wherein the  $\gamma$ -glutamyl-alkenyl-cysteine sulfoxide is  $\gamma$ -L-glutamyl-trans-S-1-propenyl-L-cysteine sulfoxide.

13. (Previously Presented) The nutritional composition of claim 10 further comprising

- (a) a calcium source,
- (b) at least one energy source selected from the group consisting of carbohydrate, fat and nitrogen sources, and optionally
- (c) Vitamin D.

14. (Original) The nutritional composition of claim 13, wherein the calcium source (a) is an organic calcium salt.

15. (Currently Amended) The nutritional composition of claim 13, wherein the carbohydrate source of component (b) is selected from the group consisting of maltodextrins, starch, lactose, glucose, sucrose, fructose, ~~xyli~~ xylitol, ~~sorbit~~ sorbitol, and mixtures thereof.

16. (Previously Presented) The nutritional composition of claim 13, wherein the fat source of component (b) is selected from the group consisting of omega-6 polyunsaturated fatty acid sources, omega-3 polyunsaturated fatty acid sources, mono-unsaturated fatty acid sources, C<sub>6</sub>-C<sub>12</sub>- fatty acid sources, and mixtures thereof.

17. (Previously Presented) The nutritional composition of claim 13, wherein the nitrogen source of component (b) is selected from the group consisting of soy bean derived proteins; milk proteins, protein hydrolysates, a mixture of essential amino acids and arginine, and mixtures thereof.

18. (Previously Presented) The nutritional composition of claim 13, wherein the carbohydrate source provides for 30 to 70 %, the nitrogen source for 5 to 40 %, and the fat source for 0.01 to 5 % of the total energy supply of the composition.

19. (Previously Presented) The nutritional composition of claim 13 comprising from 3 to 25 % by weight of component (a), from 5 to 50 % by weight of component (b) and from 1 to 95 % by weight of component (c), based on the total weight of the nutritional composition.

20. (Previously Presented) The nutritional composition of claim 10 further comprising 0.2 to 10 % by weight of other nutritionally acceptable components chosen from vitamins, minerals, trace elements, fibers, flavors, preservatives, colorants, sweeteners and emulsifiers.

21. (Previously Presented) The nutritional composition of claim 10 in the form of a dietary supplement providing from 50 to 1500 kcal/day, or in the form of an animal feed supplement.

22. (Previously Presented) The nutritional composition of claim 10 in liquid form.

23. (Previously Presented) The nutritional composition of claim 10 in granulate or powder form.

24. (Original) A pharmaceutical composition in single unit dose form, comprising  $\gamma$ -glutamyl-peptide and a pharmaceutically acceptable carrier.

25. (Currently Amended) The pharmaceutical composition of claim 24 wherein the  $\gamma$ -glutamyl-peptide is selected from the group consisting of  $\gamma$ -glutamyl-alkyl-cysteine sulfoxide, ~~or~~  $\gamma$ -glutamy-alkenyl-cysteine sulfoxide, ~~or~~ and a combination thereof.

26. (Original) The pharmaceutical composition of claim 25 wherein the  $\gamma$ -glutamyl-alkenyl-cysteine sulfoxide is  $\gamma$ -L-glutamyl-trans-S-1-propenyl-L-cysteine sulfoxide.

27. (Previously Presented) The pharmaceutical composition of claim 24 for enteral administration in the form of a dragée, tablet, capsule, sachet or suppository.

28. (Previously Presented) The pharmaceutical composition of claim 24 in the form of a veterinary composition.

29. (Currently Amended) A  $\gamma$ -L-glutamyl-trans-S-1-propenyl-L-cysteine sulfoxide obtained by fractionation of an hydrophilic, ethanolic extract of Allium, which fractionation comprises

- (a) obtaining an hydrophilic, ethanolic extract of Allium cepa, hereinafter referred to as fraction A, by using adsorption column chromatography,
- (b) separating saccharides from fraction A by using reversed-phase medium pressure liquid chromatography (RP-MPLC) to obtain fraction A1
- (c) further separating saccharides from fraction A1 by NP-MPLC using chloroform – methanol – water 6.4:5:1 as mobile phase, to obtain fraction A1-4,

(d) further fractionation by semi-preparative reversed-phase HPLC (SP-RP-HPLC) using as solvent an isocratic water/acetonitrile system buffered with e.g. 0.00625% formic acid to obtain fraction A1-4C.

30. (Original) The  $\gamma$ -L-glutamyl-trans-S-1-propenyl-L-cysteine sulfoxide of claim 29 wherein said Allium comprises Allium cepa, Allium ascalonicum, Allium ampeloprasum, Allium porrum, Allium schoenoprasum, Allium ursinum, Allium sativum or Allium fistulosum.

31. (Currently Amended) The  $\gamma$ -L-glutamyl-trans-S-1-propenyl-L-cysteine sulfoxide of claim 30 wherein said allium comprises Allium ascalonicum, Allium porrum, Allium cepa, Allium ursinum.

32. (Original) The  $\gamma$ -L-glutamyl-trans-S-1-propenyl-L-cysteine sulfoxide of claim 31 wherein said allium comprises allium cepa.

33. (Original) Process for producing a veterinary composition for the treatment or prophylaxis of a disease or condition in animal which is characterized by increased bone resorption or for the management of increased bone resorption in animal comprising homogenizing a mixture of one or more carriers that are physiologically acceptable to animals and an effective amount of a  $\gamma$ -glutamyl-peptide.

34. (Currently Amended) The process of claim 30 wherein the  $\gamma$ -glutamyl-peptide is selected from the group consisting of  $\gamma$ -glutamyl-alkyl-cysteine sulfoxide, ~~or~~  $\gamma$ -glutamy-alkenyl-cysteine sulfoxide, ~~or~~ and a combination thereof.

35. (Original) The process of claim 34 wherein the  $\gamma$ -glutamyl-alkenyl-cysteine sulfoxide is  $\gamma$ -L-glutamyl-trans-S-1-propenyl-L-cysteine sulfoxide.

36. (Currently Amended) The use as claimed in claim 1 wherein  $\gamma$ -glutamyl-peptide inhibits dose-dependently the resorption activity of osteoclasts.

37. (Previously Presented) The use as claimed in claim 1 wherein the minimal effective dose is about 2 mM.

38. (Currently Amended) The nutritional composition as claimed in claim 10 wherein  $\gamma$ -glutamyl-peptide inhibits dose-dependently the resorption activity of osteoclasts.

39. (Previously Presented) The nutritional composition as claimed in claim 10 wherein the minimal effective dose is about 2 mM.

40. (Previously Presented) The nutritional composition as claimed in claim 10 wherein the dose is at least 2 mM.

41. (Currently Amended) The use of claim 1 wherein the  $\gamma$ -glutamyl-peptide is selected from the group consisting of  $\gamma$ -glutamyl-alkyl-cysteine sulfoxide, ~~or~~  $\gamma$ -glutamy-alkenyl-cysteine sulfoxide, ~~or~~ and any combination thereof.

42. (Currently Amended) The method of claim 2 wherein the  $\gamma$ -glutamyl-peptide is selected from the group consisting of  $\gamma$ -glutamyl-alkyl-cysteine sulfoxide, ~~or~~  $\gamma$ -glutamy-alkenyl-cysteine sulfoxide, ~~or~~ and any combination thereof.

43. (Currently Amended) The method of claim ~~2~~ 42 wherein the  $\gamma$ -glutamyl-alkenyl-cysteine sulfoxide is  $\gamma$ -L-glutamyl-trans-S-1-propenyl-L-cysteine sulfoxide.

44. (Previously Presented) The method of claim 5 wherein the disease or condition which is characterized by increased bone resorption, is Paget's disease, tumor-induced bone disease or osteoporosis or any combination thereof.

45. (Currently Amended) The ~~nutritional or~~ pharmaceutical composition ~~as claimed in~~ of claim 24 wherein  $\gamma$ -glutamyl-peptide inhibits dose-dependently the resorption activity of osteoclasts.

46. (Currently Amended) The ~~nutritional or pharmaceutical composition as claimed in~~ of claim 24 wherein the minimal effective dose is about 2 mM.

47. (Currently Amended) The ~~nutritional or pharmaceutical composition as claimed in~~ of claim 24 wherein the dose is at least 2 mM.